Cranbrook Timber Supply Area
Timber Supply Review

Summary of Public Input

BC Ministry of Forests
Cranbrook Forest District
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December, 2000

This is a summary of the public input received on the Timber Supply Review in the Cranbrook Timber Supply Area. This summary does not assess the feasibility or validity of the input or whether it relates to the clearly defined mandate of the chief forester in the allowable annual cut determination.

Cranbrook Timber Supply Area

Background

As part of the review of timber supply in the Cranbrook Timber Supply Area (TSA), two opportunities were provided for public input. The first followed release of the Cranbrook Timber Supply Area *Data Package* and *Information Report* in January, 1999. The *Information Report* was a non-technical summary of the draft data and management assumptions that were to be applied in reviewing the timber supply for the Cranbrook TSA. A 30-day review period, ending February 15, 1999, was provided for the public to comment on these documents.

On December 16, 1999, the British Columbia Forest Service released the *1999 Cranbrook Timber Supply Area Analysis Report* and *Public Discussion Paper*. The public was encouraged to review and comment on the accuracy of the information in these documents and to provide additional information during the 60-day review period that ended February 18, 2000.

This report summarizes the input received during both public review periods. This information was provided to the chief forester for his consideration when he reviewed the allowable annual cut for the Cranbrook TSA. The first section of this summary outlines the public review process implemented by the Forest Service, and describes the types of public input received. The second section summarizes the public input in sufficient detail to indicate the range of input received. The original submissions (with personal identifiers removed in accordance with the *Freedom of Information and Protection of Privacy Act*) can be reviewed at the Cranbrook Forest District office.

Public review process and response

Cranbrook District staff actively solicited public input on the Timber Supply Review in the Cranbrook TSA through the following actions:

- direct mail-out of about 50 copies of the *Information Report, Data Package, Analysis Report* and *Public Discussion Paper* to local governments and MLAs, First Nations, licensees, forest workers, environmental groups, ranchers, consultants and interested individuals in the Cranbrook TSA or adjacent timber supply areas.
- the *Data Package* and the *Cranbrook Timber Supply Area Analysis Reports* were available at the district office.
- meetings regarding the *Data Package* and/or the *Analysis Report* were held with representatives from First Nations, the forest industry and other interest groups, as well as with the local MLA and individuals.
- copies of the documents were made available to the local media, and interviews were conducted with reporters from the Cranbrook newspaper and East Kootenay radio.
- newspaper advertisements were placed, advising of the availability of the documents for review by the public.
- telephone contact with various individuals and organizations, providing further information if needed and encouraging them to provide input.

As Table 1 shows, about 16 individuals attended meetings or information sessions. The Cranbrook Forest District also received six written submissions on the *Data Package* and 11 submissions on the *Analysis Report* (see Appendix 1). In addition, three submissions were received just prior to release of the *Analysis Report*.

Participants (#)	Date
Elected officials	
MLA (1)	Jan. 12/99 & Dec. 16/99
Interest groups	
East Kootenay Environmental Society (4 & 1)	Jan. 22/99 & Jan. 31/00
Forest industry	
Various companies (4)	July 14/99
First Nations	
Ktunaxa Kinbasket Tribal Council (3 & 3)	Jan. 12/99 & Feb. 10/00

Table 1: Participation in public information activities

Public Input

In this section, public input on the information presented in the Timber Supply Review documents for the Cranbrook TSA is summarized under the following headings:

- Data Package (and Information Report)
- Timber Supply Area Analysis Report (and Public Discussion Paper)
- Other comments

Data Package

Land base factors

Three submissions comment on the definition of the operable land base. The East Kootenay Environmental Society (EKES) expresses the opinion that given the recent downturn in markets, operability should be reduced, while Crestbrook Forest Industries (CFI) maintains the exclusion of steeper slopes is inappropriate as the company has harvested these areas over the past five years.

Four submissions comment on the area reductions for Environmentally Sensitive Areas (ESAs). EKES says the reductions used for community and domestic watersheds should also be applied to regionally significant fisheries watersheds, such as the Wigwam and St. Mary's rivers. CFI says the 100 per cent reduction for areas classified with extremely fragile or unstable soils is excessive; the company recommends a 70-per cent reduction based on their review of terrain hazard assessments. The Interior Lumber Manufacturers' Association (ILMA) requests clarification of how double-counting will be avoided, particularly in watersheds. The Ministry of Environment, Lands and Parks (MELP) submission notes that ESA netdowns are incomplete as most drainages have not been assessed for soils, and wildlife netdowns will occur as part of landscape planning.

Three submissions comment on specific excluded forest types. EKES maintains the definition of parkland needs to be expanded and that areas containing whitebark pine are not to be harvested in Caribou Management Areas. The ILMA requests additional information on the areas impacted and evidence that they're not currently being utilized. CFI questions the removal of older cedar-hemlock and balsam-leading types. The company says some of these are productive sites and can be converted during high pulp markets.

Four submissions comment on problem forest types. EKES expresses the opinion that these types are insufficiently accounted for, since the forest industry often chooses to avoid harvesting them. The ILMA and CFI request the rationale used to determine these reductions, and MELP notes that extended rotations are viewed as a way to include these stands in the timber harvesting land base.

CFI and the ILMA question the reductions used to account for past and future roads, trails and landings. CFI says the reductions are excessive, and provides details. The EKES submission says an additional reduction is necessary since estimates for roads are based on Forest Practices Code requirements, but rights-of-way often exceed these widths due to terrain or WCB requirements.

Existing forest inventory
The submission from EKES says since the recent inventory audit found 5.8 per cent less volume per hectare than existing inventories indicate, this should be reflected in the timber supply analysis.

Expected rate of growth
The EKES submission questions whether the lower volumes for future stands in NDT4 are properly accounted for, and notes the need for a sensitivity analysis to examine the effect of global warming on annual growth in the dry subzones of the Cranbrook TSA. The ILMA says it is unnecessary to arbitrarily establish an 1800-metre elevation break to reflect differences in productivity, as this is already accounted in the site index process and the use of operational adjustment factors. MELP expresses the opinion that upward pressure on timber supply in managed forest areas will result from better than expected future growth.

Regarding the effect of Armillaria root disease on future growth, MELP says the yield reduction used is too high and EKES says loss estimates are very conservative. The ILMA questions how the reduction was applied and whether it applies only to species, site and ages where Armillaria may logically be found.

Minimum harvestable age
The EKES submission says the use of the three criteria to determine minimum harvestable age is reasonable, but culmination age should be used for all species. The society says increasing rotation ages maximizes long-term volumes and increases wildlife habitat retention. The ILMA requests rationales for the values and process used to determine minimum harvestable ages. CFI says the minimum average diameters are much larger than needed for an economic operation and the requirement for non-pine species to reach 95 per cent of maximum annual growth may unnecessarily restrict timber flow.

Forest regeneration
CFI says the three-year regeneration delay for artificial regeneration is high considering that one-year-old seedlings are planted. The company also questions the reductions for not-satisfactorily-restocked (NSR) areas and several other regeneration assumptions in Table 17 of the *Data Package*.

Utilization standards
EKES notes that the forest industry has accepted reduced utilization standards as a result of the Forest Action Plan and since these are being implemented, they should be reflected as a timber supply netdown.

Forest cover requirements
Three submissions raise questions about forest cover requirements, particularly with regard to green-up heights and to the application of these requirements to forests in the Fire Maintained Ecosystem Restoration (FMER) areas.

Visually sensitive areas
CFI questions how the classifications for visually sensitive areas compare to TSR1, noting there should be a significant reduction to achieve the two per cent buyback directed by the chief forester. The ILMA questions the use of slope in relation to visual quality objectives, and MELP asks for information on the areas considered for retention.

Domestic and community watersheds
CFI and the ILMA note that "domestic watersheds" not used for human consumption should not be modelled under watershed guidelines. CFI questions in detail the use of a nine-metre green-up requirement and states that the majority of domestic watersheds that may impact timber supply are larger than 500 hectares and so a 35 per cent equivalent clearcut area should be used to be consistent with the Kootenay Boundary Land Use Plan (KBLUP) guidelines.

The EKES submission raises a number of concerns, including whether riparian reserves above the intakes of domestic watershed creeks were modelled as required by the KBLUP, the fact that public concerns in community watersheds such as Kimberley were not addressed, and the need to increase green-up heights as a result of recent research in the Nelson Forest Region. The society also says the maximum percentage of area less than green-up should be reduced to 20 per cent for community watersheds and 25 per cent for other domestic watersheds.

Riparian habitat

EKES says riparian management zones are necessarily wider than Forest Practices Code minimum requirements in many areas and this should be modelled more accurately. The ILMA requests further clarification of retention values and timber supply impacts. CFI says the retention factors must be revised because they are considerably higher than what is being achieved in the field, due to mountain pine beetle attacks, the predominance of pure lodgepole pine types, and the blowdown potential of spruce-balsam types.

Wildlife

The EKES submission notes that, as indicated in the KBLUP, cover requirements for caribou are to apply to the operable land base, not the forested land base. The ILMA requests at least a series of sensitivity analyses around feasible caribou management rules, given the lack of legal standing of the KBLUP and the recent findings of the administrative review in the Kootenay Lake Forest District.

With regard to ungulate winter range, the ILMA questions what assumptions are used compared to upcoming forest development plan requirements, and how minimum ages and percentages are determined (Table 20d). The MELP submission says NDT4 guidelines are standard in open forest and open range areas, while KBLUP guidelines apply elsewhere in areas with wintering wildlife. CFI is of the opinion that current cover requirements will result in continued forest encroachment, and instead proposes an approach that ensures a portion of the forest is always in age class 1 (via continual harvesting) to provide a food source, with less restrictive cover requirements elsewhere.

The MELP submission details the wide diversity of wildlife in the Cranbrook TSA, and notes that several concerns were not addressed (e.g., grizzly bear habitats, old growth management areas). MELP says this will occur during landscape planning and should be accounted for in the analysis.

Landscape-level biodiversity

EKES is of the opinion that the draft biodiversity emphasis options should be used in the timber supply analysis as they best represent current practice. The society says much of the Cranbrook TSA is in deficit in relation to biodiversity targets and the need to recruit mature and old forests must be reflected in the base case. A sensitivity analysis on immediate implementation of the old-seral requirement for low emphasis biodiversity variants is recommended; the society says the three-rotation delay is unreasonable and represents an unacceptable threat to biodiversity. EKES also notes that minimum retention area percentages for old-seral appear to be incorrect (Table 20a) and that modelling underestimates the presence of early seral since roads are removed from the timber harvesting land base.

CFI notes that the mature forest requirement is not to be applied in NDT2, and suggests its inclusion in NDT3 be tested in a sensitivity analysis to determine if it constrains timber supply. The ILMA requests further information and expresses the opinion that KBLUP guidelines should not apply as the plan has no legal standing. MELP expresses the opinion that mature and old requirements can be met on the operable land base if harvesting is allowed

through partial cutting and by considering other reserved areas.

Stand-level biodiversity
EKES is of the opinion that the 3.9 per cent volume reduction to account for residual volumes in cutblocks (usually for wildlife tree patches or WTPs) is insufficient and does not adequately reflect current management. CFI and the ILMA say 3.9 per cent is considerably higher than expected, based on the impact analysis done by the chief forester. CFI also says the reductions in open forest and open range units are significant; since these areas will eventually contribute to mature and old requirements, the company asks how this will be modelled to avoid double-counting.

MELP is of the opinion that the sample used to determine the residual volume reductions does not reflect current practice, and that part of the residual volumes should be attributed to other factors than WTPs. MELP notes that volume retentions are not permanent reductions, merely a rotation delay.

Non-recoverable losses
EKES maintains that allowances for NRLs should be significantly increased to account for the potential increased frequency of fire, insect infestations and disease due to global warming. CFI says the volume may be high due to increased salvage logging, and suggests NRLs should decline over time as the TSA is fully roaded. The MELP submission notes the need to distinguish small areas, killed by natural processes, that should not be salvaged due to cost and impact on biodiversity values.

Timber Supply Area Analysis Report

Land base factors
The submissions from EKES and MELP express the opinion that operability lines are overly optimistic, noting a backlog of steep, high elevation sites where licensees avoid harvesting. CFI states its disagreement with the 100 per cent netdown on steeper slopes, as there is proven performance in these areas.

EKES questions the 10 metre cut-off for defining low productivity sites for lodgepole pine; the society says this is very liberal and does not reflect current practice.

CFI says the 100 per cent removal of areas classified with extremely fragile or unstable soils, or with severe regeneration problems may be excessively restrictive considering current harvesting and reforestation technology. The company says these netdowns should be validated prior to the next timber supply review.

Three submissions maintain that stands of whitebark pine should be excluded from harvesting, because there is no seed source for regeneration, the species is considered threatened across its range and it has high value for wildlife and traditional uses. CFI questions the removal of 13,000 hectares of high elevation parkland, particularly based on a biogeoclimatic variant line. The company also disagrees with the removal of older cedar-hemlock and balsam-leading stands, saying some of these are extremely productive and have been harvested.

EKES says additional netdowns for existing and future roads, trails and landings are needed to reflect current practices, based on their field observations that impacts often extend beyond the 20-metre right-of-way. CFI says the netdowns are excessive, citing major advances in cable harvesting and rehabilitation techniques, the trend to smaller landings, and

the fact that 20 metres reflects the right-of-way width not the actual construction width less tree crown overlap.

The City of Kimberley requests that all lands within the proposed Nature Park be removed from the timber harvesting land base.

Forest inventory factors
EKES says that, in recognition of the inaccuracy of inventory information, it is imprudent to accept the optimistic inventory assumptions in the base case. The MELP submission identifies several uncertainties that indicate a significant downward trend in available timber.

The Ktunaxa Kinbasket Tribal Council submission notes that stands do not have even tree distribution and this has led to consistent overestimates of volume for many years. The Tribal Council says there's particular uncertainty about timber volume estimates at high elevations and that productivity of these sites will be directly related to short- and long-term climatic trends. CFI is of the opinion that any overestimation of volumes in high elevation stands would have been identified in the inventory audit.

Expected rate of growth
With regard to high elevation growth rates, CFI notes that the results of the Old Growth Site Index study were not included in the analysis but could easily compensate for any potential overestimate of high elevation productivity. The Kimberley Community Forest Working Group express the opinion that productivity estimates are overly optimistic in light of the impacts of global climate change (warmer winters, increased drought, greater uncertainty about negative climatic events).

EKES says the minimum harvestable age must be at least 95 per cent of the age at which maximum annual growth occurs. The society says harvest of younger, high volume stands should only be approved if needed to achieve desired age and patch objectives. CFI questions the minimum harvestable age for lodgepole pine on steep, poorer sites, and recommends it be lowered to a biologically achievable number considering mountain pine beetle infestations.

Not-satisfactorily-restocked areas
CFI says if backlog NSR areas are indeed productive forest land, they will reforest through normal successional processes over time and should be re-introduced to the timber supply analysis at an extended time, such as 30 years.

Green-up requirements
CFI says the use of green-up heights other than two metres is inconsistent with the KBLUP. The company particularly expresses concern about the use of a three-metre green-up in moderate recreation resource emphasis areas, saying this contradicts the intent of the KBLUP. With regard to watersheds, CFI says the nine-metre green-up height does not reflect required practice and notes the regional Forest Service staff have recognized that stands contribute to hydrologic green-up long before reaching nine metres and has instructed other TSAs to use six metres. CFI also questions green-up ages used in the analysis, based on information from the Invermere TSA Enhanced Forestry Management Pilot Project.

Wildlife and riparian areas
CFI says it is alarmed that the land base reduction for riparian management areas is 7.7 per cent, as this is more than double the impact estimated in the chief forester's Forest Practices Code impact assessment. The company also questions the 50 per cent retention in management zones, given that almost 50 per cent of the Cranbrook TSA is covered by lodgepole pine.

The Ktunaxa Kinbasket Tribal Council says that since caribou has been designated an identified wildlife species requiring special management provisions, it may be necessary to add areas of protected old growth and further restrict harvesting in other areas.

Biodiversity

EKES and MELP maintain that modelling old growth in the non-contributing land base as aging forever is inconsistent with natural fire and disease cycles. EKES says a further netdown is needed to assure biodiversity requirements are met in the future. EKES and MELP say that since over two-thirds of the landscape units in the TSA are in deficit with regard to mature and old components, there is a need to restrict mature and old removal until a spatial model can demonstrate maintenance of these values with appropriate patch size over time. EKES also expresses the opinion that continuing to model biodiversity emphasis based on 10/45/45 is inappropriate.

CFI expresses concern that the application of biodiversity requirements may impact the timber supply in the short and medium term. The company is also concerned with the 3.9 per cent reduction to timber yields to account for residual volumes left in harvested areas to meet stand level biodiversity objectives. The company says the chief forester should direct the district to achieve the objectives within the prescribed impacts outlined in the chief forester's 1996 Forest Practices Code impact assessment.

The Ktunaxa Kinbasket Tribal Council says the conclusion that any older stands not needed to meet biodiversity requirements should be harvested in the next two decades is too big a risk; any major natural events in the remaining old growth would leave no older reserves as a contingency.

Oldest-first schedule

Two submissions question the use of the oldest-first harvest schedule. EKES says the schedule should be based on random harvest ages above the minimum harvestable age, which more closely reflects current management.

Non-recoverable losses

Three submissions express concerns that the estimates for losses may be insufficient, due to the dominance of fire-maintained ecosystems, the impacts of climate change and the extent and speed of projected beetle infestations. EKES says recent blowdown events emphasize the need for further netdowns and that assumptions around the impacts of Armillaria root disease are insufficient.

Socio-economic impacts

Three submissions express the opinion that the analysis does not sufficiently consider changes in the social and economic drivers in the Cranbrook TSA. These changes include the transition from single resource-dependence to greater diversification (e.g., tourism investments) and increasing public concerns about viewscapes, recreational opportunities, and environmental values (water quality, biodiversity, wildlife habitat, etc.).

EKES says changes in social values should be reflected in the timber supply review as licensees are increasingly encountering resistance to management proposals on sites prioritized by communities for non-timber values. A consultant's submission says year-round back-country operations will potentially generate a higher return to the Crown than timber does.

Two other submissions are of the opinion that the forest industry remains a cornerstone of the local economy, and must be maintained in a healthy and productive state. Grizzly Peak Log Homes says a new direction is needed that puts greater emphasis on sorting the available timber

cut for the highest employment and economic success.

Other Comments

Many submissions commented on factors or issues other than those specifically covered by Timber Supply Review documents. These comments are summarized in this section.

Timber Supply Review process
Two submissions say the lack of final criteria and quantitative information in the *Data Package* make it impossible to adequately provide input. CFI expresses disappointment that the comments they did make, which would have resulted in upward pressure on timber supply, were not incorporated into the final inputs for the analysis. CFI concludes the process is flawed and not intended to solicit meaningful input.

The MELP submission says the analysis does not incorporate all current practices or the best information available, nor does it reflect the most recent land-use decisions. EKES says the base case fails to adequately reflect what is happening on the ground and could lead to even greater environmental, social and economic impacts in the future. A consultant's submission says the analysis only works if one assumes the forest sector will continue to dominate land use and the politics of land use decisions into the distant future.

The Kimberley Community Forest Working Group say the resolution of land claims may have major implications on timber supply and should be examined in a sensitivity analysis. The group also says full-cost accounting should be used in the assessment of government revenues. The MELP submission maintains that the timber supply review process is only a wood fibre accounting process, where fish and wildlife issues are considered as impacts on harvest levels, but the converse is not considered.

EKES maintains it is appropriate to model all aspects of the KBLUP in the base case. The society says that, although KBLUP has not yet been declared a higher level plan, it is government policy and is being implemented. The ILMA submission says, given the current state of confusion over the status of the KBLUP, its lack of legal standing and the numerous conflicts with the Forest Practices Code, the analysis should focus on Code requirements only.

Harvest Levels
Four submissions express the opinion that the current AAC should be maintained, based on the analysis information and the importance of the forest industry. CFI is of the opinion the AAC could be increased to prevent an epidemic mountain pine beetle attack, given the preponderance of twilight and mature lodgepole pine.

The Kimberley Community Forest Working Group says the base case must be approached with great caution and must not close future options, such as increasing diversification in tenures (more woodlots and community forests). The group believes that within decades, forest planning will face a wall of spatially-related constraints and the lack of a spatially explicit plan is a key concern. The group says the willingness to consider local wishes (e.g., opposition to watershed logging) by reducing the AAC will go a long way in enabling solutions to current tensions between competing land uses.

Two submissions say the risk of data errors and the uncertainty of the future (e.g., climate change, disease, use of forest for other purposes, rapid world change) require the AAC be significantly reduced to a sustainable level with a healthy margin for error and unpredictability. Two other submissions identify a variety of downward pressures on

timber supply and recommend increasing the Forest Service Reserve to 15 per cent of the AAC to provide flexibility to deal with future uncertainties.

EKES is of the opinion that until a long-term harvest projection based on a spatial model is available, harvest levels must be sufficiently conservative to retain options for meeting other objectives. No reduction in AAC now would imply that impact assessments of the Forest Practices Code and the KBLUP that projected a 10 per cent harvest reduction are invalid. EKES says environmental accounts were consistently degraded throughout negotiations in order to lower what now appears to be non-existent impacts on timber supply.

Partition

Five submissions comment on the desirability of creating a partition and/or an AAC uplift for harvesting in the forage ecosystem enhancement or restoration areas in the NDT4. These submissions say harvesting must be speeded up to stop the encroachment of forests onto traditional wildlife winter ranges and recommend an increased AAC specifically for the NDT4, for exclusive use on open range/open forest areas.

EKES says that, along with the FMER areas, other marginal stands should be partitioned so licensees can demonstrate the wood is suitable for logging. The Ktunaxa Kinbasket Tribal Council says a partition of the NDT4 areas should be considered to facilitate innovative harvest techniques and ecological restoration projects to improve productivity; otherwise, expected productivity should be adjusted downward.

First Nations

The Ktunaxa Kinbasket Tribal Council notes that no analysis is presented regarding the potential impact of First Nations issues on the land available for harvesting. The Tribal Council says the chief forester should consider that after a treaty settlement, within the next five years, the Ktunaxa Nation will assume full control over a certain percentage of lands within their traditional territory. In addition, the Tribal Council says the ongoing identification of archaeological and cultural sites, as well as traditional use sites and medicinal and food plant gathering areas, will also remove land from the timber harvesting land base.

Submissions received by the Cranbrook Forest District

Submissions received on the Data Package

Government agencies
Ministry of Environment, Lands and Parks, Forest Ecosystem Specialist, Cranbrook

Industry
Interior Lumber Manufacturers' Association
Crestbrook Forest Industries (known as Tembec Industries Inc. effective October 1, 2000)
Grizzly Peak Log Homes

Interest groups
East Kootenay Environmental Society

Local government
Regional District of East Kootenay

Submissions received on the Timber Supply Analysis Report

First Nations
Ktunaxa Kinbasket Tribal Council

Government agencies
Ministry of Environment, Lands and Parks, Forest Ecosystem Specialist, Cranbrook

Industry
Crestbrook Forest Industries (known as Tembec Industries Inc. effective October 1, 2000)

Interest groups
East Kootenay Environmental Society
Kimberley Community Forest Working Group
Cranbrook and District Chamber of Commerce
East Kootenay Hunters' Association*
Rocky Mountain Trench Natural Resources Society*
Rocky Mountain Naturalists*

Local government
City of Kimberley
District of Sparwood

General public
Three individual submissions

*submissions received prior to release of the *Analysis Report*

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